MOOCs as LIS Professional Development Platforms: Evaluating and Refining SJSU's First Not-for-Credit MOOC

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Beyond for-credit offerings, some library and information science (LIS) schools are exploring MOOCs as a means to promote lifelong learning and professional development. Using web surveys and descriptive content analysis methods, this paper empirically addresses if, in LIS programs, MOOCs can fill a role and serve new populations of learners within large-scale learning environments. To do so, the authors use a MOOC they designed, built, and instructed as a test bed. Findings reveal that students did use the MOOC for professional development, that they expanded their knowledge and applied concept models learned in the course, and benefited from diverse viewpoints provided by the global community of learners. In addition to other findings, the research reveals that the authors' MOOC model was successful and there is significant opportunity for LIS programs to serve the profession through large-scale professional development learning environments like MOOCs.

Keywords: MOOCs, online learning, professional development, library and information science, web surveys, descriptive content analysis

Introduction

Pundits and mass media have argued that massive open online courses (MOOCs) can transform education in the 21st century, presenting an opportunity for global, open learning. Many have greeted MOOCs with enthusiastic acclaim and described them with such words as "storming" (Clarke, 2013, p. 403), "unprecedented" (Schwartz, 2013, p. 1), and "revolutionary" (Morrison, 2013, p. 1). Understanding this new, evolving landscape and its potential to make learning more accessible and affordable should be a priority for educators, and is already being scrutinized by faculty, administrators, and librarians.

Beyond for-credit offerings, some schools are exploring MOOCs as a means to promote lifelong learning and professional development. In their MOOCs, LIS schools have offered timely content and learning opportunities for practitioners far and wide. Either on the sideline or on the frontline, LIS administrators and faculty are beginning to address the potential and pitfalls of MOOCs in a spirit of risk-taking and environmental scanning of future opportunities, especially in the broad area of online education.

In this paper, we begin to empirically address if MOOCs can, for LIS programs, fill a role and serve new populations of learners within large-scale learning environments. To do so, we use a MOOC we designed, built, and instructed as a test bed.

In Fall 2013, the SJSU School of Library and Information Science (SLIS) offered its first large-scale, open online course, the Hyperlinked Library (HL)

MOOC. The MOOC was intended to serve as a professional development opportunity for students working in LIS environments. Unlike SJSU's partnership with Udacity, the SLIS's HL MOOC was offered free of charge, not for academic credit, and was taught in a bespoke learning environment.

For this paper, the following research questions frame our inquiry:

- Is there potential for LIS programs to serve new populations of learners using MOOC environments?
- Can this MOOC model help LIS practitioners develop professionally?

This paper begins with a brief review of the literature on MOOCs and large-scale professional development, before providing background about the HL MOOC. Next, we detail the findings of our analysis of pre- and post-course online survey responses about expectations and motivations for enrolling in the MOOC, opinions regarding the course design, course content, and perceptions regarding the course's value as a professional development venue. The paper finishes with a discussion regarding our takeaways for refining the platform and course design, as well as insights regarding the use of large-scale learning environments for professional development in LIS.

Literature Review

A Brief History of MOOCs

MOOC—what the acronym describes is open to interpretation. While the "M" in MOOC stands for massive, there exists no hard-and-fast rule that defines what size a course needs to be to fit the name (Fasimpaur, 2013, p. 13). While openness is the primary means of differentiating MOOCs from other online courses (Fasimpaur, 2013), varying interpretations of how open a course needs to be, also confuse the issue. MOOCs are most often free and open to anyone, but some courses may re-

strict class enrollment on a first-come first-served basis. Some may also require fees. The second "O" in MOOC is a given—the course must be offered online. Even then, however, many students have taken it upon themselves to meet in-person with others taking the same MOOC, as evinced by the nearly 30,000 people who have signed up to join one of the Coursera communities on Meetup.com, a site dedicated to helping groups with similar interests meet face-to-face (Meetup.com, 2013).

The term MOOC was first used in 2008, by George Siemens and Stephen Downes, to describe a free, online course of 2,300 students taught at the University of Manitoba (Educause, 2011). Since then, large-scale learning opportunities have multiplied, including varying forms and sizes of for-profit and for-credit MOOCs along with strategic partnerships with organizations like Coursera and Instructure. As reported in The New York Times, Harvard University and the Massachusetts Institute of Technology (MIT) enrolled 370,000 students in MOOCs in Fall 2012, while Coursera reached more than 1.7 million students (Pappano, 2012).

xMOOCs and cMOOCs

MOOCs have developed their own styles and approaches, and two general types of MOOCs have emerged: xMOOCs and cMOOCs. The former focuses on knowledge consumption, while the latter emphasizes knowledge creation.

Traditional teaching and learning techniques define xMOOCs. Using centralized learning platforms (e.g., Coursera), they emphasize individual learning using automated assessment tools. xMOOCs accentuate the "sage on the stage" transmittal approach to teaching that follows cognitive-behaviorist learning theory (Smith & Eng, 2013), and they do so in order to reach massive numbers of learners.

In contrast, cMOOCs stress the relationship between course content and a community of learners. Social learning, in the

case of cMOOCs, is emphasized through uses of distributed tools (e.g., a combination of a course site, student blogs, and social networking sites) to build networks of knowledge and learners. Unlike their xMOOC counterparts, the role of an instructor in a cMOOC is to be a "guide on the side," a facilitator of the knowledge-making process who uses connectivist learning theory (Siemens, 2004; Siemens, 2012) tenets to support teaching methods. The dispersed network of students taking a particular cMOOC, then, is hard to quantify; where xMOOCs require enrollment in a central location, cMOOCs may not.

Measuring MOOC Success

The literature on MOOCs often addresses student completion rates (or lack thereof) and with good reason. When universities are offering courses for free to the general public, leadership and stakeholders want to understand if the model is effective, and if the cost to support instructors and instructional resources is a worthy investment.

Reported data show completion rates as quite low, especially in comparison with traditional higher education courses. Often, MOOCs report completion percentages in the low teens and below (DeJong, 2013; Jordan, 2013). In a study of their own Coursera-hosted MOOCs and the million-plus students who took them, the Pennsylvania Graduate School of Education reported that completion rates ranged from 2 to 14 percent, with lower course workloads acting as the only statistically significant variable shown to improve those percentages (Stein, 2013).

While research is trying to understand completion rates and the variables that influence them, even MOOC instructors vary on how they define completion. For examples, see the MOOC completion project (Jordan, 2013). Stewart (2013, New Literacies and Roles for Teachers and Students section, para. 2) argues the voluntary nature and fee-less enrollment process enables students to "set some of their own terms for participation," which are notably different from the normative definitions of completion and which challenge our "foundational cultural concepts" in learning. In fact, the focus on retention and completion, according to Koller, Ng, Do, and Chen (2013), should be balanced to include more research on the value "non-completers" glean from MOOCs, and how the experience could be tailored to fit their particular learning needs.

Types of MOOC Learners

The focus on completion rates, as Koller et al. (2013) highlight, privileges a certain kind of learner in the eyes of MOOC pundits—the active completer. However, students may mix and match course material to their needs and in relationship to the amount of time available to them to participate, in essence shaping a buffet-style learning experience, even if they do not officially complete the course. Research by Koutropoulos, Gallagher, Abajian, deWaard, Hogue, Keskin, and Rodriguez (2012), Milligan (2012), and Hill (2013) has identified four categories of learners in their MOOCs: lurkers, moderately active participants, memorably active participants, and drop-ins. Lurkers benefited from browsing the course's materials; moderately active participants actively engaged in conversation and some course topics; memorably active participants participated in a majority of the topics, completed course assignments, and were active in discussions; and drop-ins engaged with select topics without ever intending to complete the entire course.

MOOCs for Large-Scale LIS Professional Development

Beyond the for-credit and for-profit MOOCs, there is potential for open, large-scale learning to provide professional development opportunities. Trends identified in the 2013 Horizon Report in-

clude the great potential of MOOCs "for continued, advanced learning at zero cost, allowing students, life-long learners, and professionals to acquire new skills and improve their knowledge and employability" (Johnson, Adams Becker, Cummins, Estrada, Freeman, & Ludgate, 2013, p. 4). Like Ecclestone (2013), we wondered: Could online, large-scale professional development for LIS professionals—usually confined to webinars and virtual conferences—provide new skills and new ideas about the profession?

Learning 2.0 programs, also known as "23 Things," have offered online technology-focused professional development for library staff and could be considered an early version of LIS-focused MOOCs (Stephens, 2013a). Utilizing concepts such as self-directed learning, play, and an emphasis on lifelong learning, these programs have been offered for individual libraries as well as consortial and state level iterations to reach thousands of library staff. Benefits to staff include increased comfort with emerging technologies and an increased desire to continue learning (Stephens, 2013b). A newer version, "23 Mobile Things," offered first at a public library in Denmark and recently made available to library staff in Australia and New Zealand, highlights applications for smart phones and tablets; hundreds participated in the program (ANZ 23 Mobile Things, 2013).

Background

The Original HL Course

In Fall 2011, one of the authors created the original HL course at SJSU SLIS. The course explores emerging trends and technologies in information environments and utilizes a humanist approach to user-focused services. Stephens and Collins (2007, p. 255) defined the HL model as: "an open, participatory institution that welcomes user input and creativity. It is built on human connections and conversations."

The course is built on principles Jenkins (2012) defines as "connected learning": a shared purpose, a production-centered approach, and an openly networked environment. Students write reflective blogs, complete artifact-based assignments, and participate in a virtual symposium of presentations of their learning.

The HL MOOC Structure

The course structure of the MOOC version of the HL incorporated content updated from the SLIS course by the co-instructors. Ten modules were scheduled over a twelve-week "semester." Students could earn a certificate of completion, if they finished three of five artifact-based assignments of their choosing, in addition to blogging and participating in an end-of-course virtual symposium. The weekly schedule is available in Appendix A, and assignment descriptions are available in Appendix B.

The primary video lectures were created for the MOOC by the co-instructors, and additional guest lectures were contributed by practitioners from LIS, the museum community, and information architecture. Question and answer sessions with speakers recorded via Google Hangouts augmented course modules further. *Library 2.0: A Guide to Participatory Library Service* (Casey & Savastinuk, 2007) served as a core reading, which was graciously provided free-of-charge by its publisher. Other supplementary materials were freely accessible on the World Wide Web.

More than 360 MOOC students from all over the world explored the HL model through recorded presentations and other content, as well as practical production centered assignments that encouraged students to apply what they were learning. Student demographics are available in Appendix C.

The HL MOOC Course Environment

The HL MOOC used a bespoke learn-

ing environment that we developed using the open source content management system, WordPress (n. d.), and modified through selective use of plugins, including BuddyPress (n. d.) and custom web design. Over the past six years, we have been developing this WordPress-based learning environment to support our respective teaching responsibilities. The iterative design process has allowed us to mold the environment's functionality to the needs of our students and ourselves. We both espouse a constructivist teaching philosophy that emphasizes meaning-making and knowledge construction through social learning and artifact development; the environment matches that philosophy well. In addition to a badge system, which was used to reward participants for various system tasks, instructor-assessed assignments, and community-nominated behaviors, we built in elements that encouraged interaction and community building to aid learning. Our MOOC was aligned with the cMOOC tradition.

Research Methods

Web Survey Methods

To address the research questions, we designed two Web-based survey instruments disseminated using Qualtrics survey software. The surveys, offered at the start and end of the MOOC, elicited quantitative and qualitative responses. The surveys included demographic queries, Likert scales, and open-ended question types. The Pre-MOOC Survey is included in Appendix D, and the Post-MOOC Survey is included in Appendix E.

Survey Sample Size

The target population for the survey included all of the registered students in the HL MOOC. Links to both surveys were sent via email to 363 registered members of the MOOC. We made announcements on the course site that the survey would be

coming, and we sent reminder emails once for each survey. At the close of the research portion of the project, we collected a total of 196 pre-course survey and 151 post-course survey responses. This represents 54% and 42% of the MOOC participants, respectively. Responses deemed incomplete were those in which no answers were given beyond the initial informed consent question; we removed these responses from the data set.

Content Analysis Methodology

Using descriptive content analysis (Neuendorf, 2002), we analyzed the open-ended survey questions. We initially coded the qualitative survey responses separately, developing our own codebooks at first. Subsequently, we reviewed, edited, and merged the preliminary codebooks into a master codebook. We shared coding duties to ensure inter-coder agreement.

Findings

Student Expectations

Pre-MOOC
In the pre-course survey, students discussed why they were interested in the HL MOOC. Our coding of 101 open-ended survey questions revealed three major thematic categories, ranked in order of frequency:

1. Students felt the course's low barriers to enrollment (primarily cost), structure, and time requirements would be convenient (53%).
2. Students believed the course would aid their professional development and lifelong learning (45%).
3. Students wanted to better understand our MOOC model (38%).

Overall, students believed the MOOC would provide a convenient learning opportunity. Convenience was often framed in terms of the time requirements, the dura-

tion of the course, its accessibility online, and the portability (e.g., access via mobile devices), as well as the cost of the course. "I don't have time or money to go to conferences," responded one student, and "MOOCs provide a way to engage with other professionals working on the same issues in other libraries and for a reasonable cost and time-commitment," said another.

To our students, the MOOC also provided an opportunity to engage in high-quality professional development and life-long learning, which would allow them to reskill for their jobs, without the typical stressors of for-credit, fee-based courses.

Students also indicated they enrolled in the course to experience firsthand the "hype" of a MOOC environment and explore our particular approach to MOOCs, especially given the course's relationship to the LIS profession. They were "curious" about how MOOCs worked, and they wanted to investigate our model's particular strengths and weaknesses.

Post-MOOC Reflections

For the question "To what extent were your expectations of the MOOC fulfilled?," 92% of the 123 respondents indicated that their expectations were either fully or partly met. A follow-up question asked students to explain their choice. Analysis of the 101 answers to this open-ended question revealed the following thematic areas, again, ranked in order of frequency:

1. Students wanted to finish but did not because of time concerns, work, life, et cetera (30%).
2. Students felt the MOOC exceeded expectations in various ways: content, delivery, and networking (21%).
3. Students learned about modern library practices on a global scale (17%).

One respondent's statement summed up the majority of those who expressed conflicted feelings about finishing: "I had hoped, perhaps, I would be able to do the three assignments necessary, but some un-

expected projects at work kept me from fully completing them. I did learn a lot about participating in an online learning environment, which was my primary goal all along." The expression of a positive outcome, even though the MOOC was not completed, was echoed by others, such as, "This is my fourth MOOC and the first one where I haven't 'completed' it to the point of receiving a piece of paper. So my expectations of the outcome in that way weren't fulfilled. However, my expectations of the learning were more than met!"

Self-Reported Success Rates and Characteristics

In the post-course survey, 76% percent of survey respondents indicated that they felt somewhat or completely successful. To help us understand how they came to that assessment, we asked students how they gauged their success in the course. By coding 101 qualitative answers, we saw four major categories emerge, which are listed below in order of frequency:

1. Students judged that they were successful if they were able to consume course lectures and readings, as well as complete assignments (62%).
2. Students perceived success when they understood core concepts from the course and knew how they could make direct application of that knowledge (49%).
3. Students measured their success based on the amount of interaction they had with their peers (32%).
4. Students indicated that they did not feel successful due to time constraints (14%).

Completing assignments, working towards the certificate of completion, consuming course readings, and watching instructor and guest lectures served as markers for students to judge their success in the course. Some students responded that they felt successful when they understood

core concepts and models introduced in weekly materials and lectures. In addition to their newly found content knowledge, students also indicated that they felt successful when they could apply that knowledge directly to their professional environment. "I was able to take away concepts and immediately implement them in my professional and personal life," wrote one student. Many students responded that they felt successful when they participated in writing blog posts, received comments on their blogs, and engaged their peers in discussion throughout the course site.

Students often reported that effects of time influenced their rate of success and determined the degree to which they could consume aspects of the course. For some, they were able to "put aside" or "plan for" the time to review materials and lectures; however, to many others, "constraints" of time, sometimes due to personal and professional responsibilities, limited their success. As one student wrote, "I had every intention of doing the work, reading the materials, listening to the videos, and being an active participant—but time was not my friend."

What Students Took Away from The HL MOOC

In the post-course survey, 101 respondents answered the question "What did you gain most from taking part in the MOOC?" The question offers insights into the most salient takeaways from the course for the respondents. These include the following thematic areas ranked in order of frequency:

1. Students learned about new ideas, new knowledge, and new trends (61%).
2. Students discovered that they are able to learn, collaborate, and discuss/exchange ideas with others in evolving networks and with those beyond their individual library environments (16%).
3. Students gained insights about themselves through personal reflection about

their learning styles, professional practices, and the ways they view the world (16%).
4. Students gained inspiration, energy, and excitement about the field (12%).
5. Students gained new technological skills through their learning experience (7%).

Clearly, the majority of the participants came away with new information and ideas. One respondent noted "Seeing all the new technology in action and seeing what we can actually use it for, and realising that it is for me and not just other people…I have a lot of ideas I would now like to follow up." Another reported new insights and "more exposure to innovative public library programming," while another student was "getting ideas to try to implement in [her] own library." The other categories, while not as prominent, detail other significant takeaways. One participant gained knowledge "that there is a community that is worldwide who have wonderful ideas to offer me and that I have some ideas to offer others," while another found "a new motivation." The concept of a renewed interest in the profession was noted via responses such as "Rekindling of interest in service aspect of librarianship" and "[Regained] pleasure in my daily work."

Some students detailed personal, self-reflective insights they took away from the MOOC. One gained "awareness of my personal learning style, needs, and limitations," and another came away "knowing that I need to keep learning." Some realized large-scale learning was not the right fit: "Probably that MOOCs are not right for me." Others reflected on the personal commitment made to the learning experience, noting, "that if you are willing to participate, you will find the time."

The Model

What Worked Well
When asked what worked in the MOOC

course, including materials, lectures, and the environment itself, 101 student responses developed into three major categories when coded (listed in order of frequency):

1. Students enjoyed the variety of viewpoints provided by course content, the instructors, and the guest lecturers (55%).
2. Students often talked about how they enjoyed making connections with their peers, collaborating in the community, and building their professional network (35%).
3. Students felt that aspects of the course made the experience convenient (20%).

Students remarked that the course content, instructor lectures, and guest lectures provided a diversity of viewpoints. The addition of guest lecturers to the MOOC appealed to students, because they significantly added perspectives from which the course content could be approached. In addition to each module's selective core content, we supplemented it with generous selections of other text-based and media-based materials, which allowed students to sample content from a range of sources and viewpoints. Students responded favorably to this approach.

The post-course survey indicates that students enjoyed interacting with each other throughout the course. They responded that, even though the course was virtual and asynchronous, they felt they knew their peers, and it was "easy" for them to interact with each other. Not only were they appreciative of the community, they expanded this point to explain that the global demographics of course's participants enhanced the community feel and helped them to expand their professional network of peers. "I really enjoyed getting to learn from other professionals about what is going on in the larger library world, rather than being only focused on my work at my individual library," wrote one student.

Finally, many students felt the course's

asynchronous, online format was convenient for them and aided their learning. While the course had sequential weekly modules, we encouraged students to go at their own pace, and review materials as they could; this was reflected in survey responses by a number of students, who responded that the self-paced nature was highly convenient, given that they liked to schedule time to participate when they could. Additionally, students appreciated that the content was accessible across devices and portable via mobile devices, allowing them to consume lectures and readings on their own terms (e.g., on mobile devices in a park or in their backyard).

What Could be Improved

For the question, "What steps could be taken to improve the MOOC?," 101 participants shared insights for improving the delivery of the MOOC. Answers ranged from very specific suggestions about course pedagogy and design to broad, prominent thematic areas listed below in order of frequency:

1. Refine the course site: Students suggested more notifications related to discussion responses and clearer waypoints to and from community aspects of the course platform (18%).
2. Modify the course content: Students suggested various changes to course content, delivery, workload, and topics—reducing the amount of readings in particular (12%).
3. Adjust the course length: The workload would be achievable, students said, if they had more time. Other students suggested shortening the course length (9%).

Comments about the platform design offer useful insights for refining the Word-Press/BuddyPress environment, especially where the social aspects are concerned. Rich comments such as this one will inform future versions of the course site: "I

think most people did not understand that you could 'tag' or 'mention' someone in a comment/post."

Respondents were candid in their feelings about the workload: "Too much content for the timeframe; ever-increasing feelings of guilt." Others wanted "more time" but felt the "course was just right in terms of links. "It was just so content rich, and at times it was hard to get through all of the supplementary stuff."

Other specific suggestions included pairing up "study buddies" in the course, recording shorter videos, offering more "how to" pages and a longer "catch up" period, opening modules on Friday instead of Monday, creating specific discussion boards, and scheduling live question and answer sessions.

Discussion

The research component of the HL MOOC project has multiple goals, one of which is to contribute to a better understanding regarding how not-for-credit MOOCs can serve as professional development opportunities. Funded in part by a research grant from San José State University, we are evaluating the HL MOOC to identify areas where the model is effective, and provide recommendations regarding how to improve the design of professional development MOOCs in the future. Other aspects of the research agenda include evaluating the learning platform, defining and exploring participants' sense of community within the MOOC, and analyzing the perceived roles LIS practitioners will play in large-scale learning environments. The data analyzed in this paper leads to the following considerations for future professional development focused MOOCs.

Adjust Pedagogical Approaches

From the findings, it is clear that a subset of the course population struggled to find the time necessary to view the lectures, engage the materials, and participate in the course community, due in part to the workload of the course and personal and professional responsibilities. From our standpoint, there are two pedagogical adjustments that we can make to improve student learning and engagement: first, we can make changes to the workload and duration of the course; and, second, we can scaffold learning by actively engaging students in conversations about personal learning goals, expectations, and time management.

Because of the exploratory nature of this course, we adapted materials, assignments, and the schedule from the original for-credit HL course with only slight adjustments. We know now that this was to the detriment of our students. In a future iteration of the course—should there be one—we will pare down the course materials and more clearly identify what is required reading and what is optional in order to target the focus of our students and help them manage their own time.

We envision two processes to balance the workload of the course with its time requirements. First, we may collapse modules into smaller thematic chunks, thus reducing the overall length of the course; or, we may allow two weeks per module in order to provide more time to engage with course materials and participate in the life of the learning community. Our concern with reducing the overall length of the course is that it could negatively impact the growth of the learning community: less time would amount to less opportunity to engage one's peers and develop a sense of community. Future research on cMOOCs would benefit from analysis of community development over time, using social network analysis procedures and targeted survey questions, which would help us and others better understand this concern.

A future iteration of the HL MOOC and MOOCs in general would benefit from engaging students in conversations about personal learning goals, expectations, and time management. Unlike traditional higher education courses where assessment procedures, course schedules, and due dates

are set, in MOOCs these things may be in flux, leaving students with less obvious benchmarks to gauge their progress and success. We hypothesize that students will feel more successful and more engaged in another version of the HL MOOC if they strategically develop personalized learning goals, expectations for themselves, and a time management program. While some students reported they did this in part or in whole, the onus is on MOOC instructors to scaffold student learning by engaging students in a conversation about learning strategies, either through discourse, an initial assignment, or by providing a student guide like the one Koutropoulos and Hogue (2012) developed.

The Learning Platform Matters

Before the HL MOOC began, we postulated that the social course environment we had developed over the years would support cMOOC-style learning, and research findings confirmed our assumption. The social affordances of the system enabled participatory and connected learning, enabling students to create, share, and remix course content and their own knowledge. They used the HL MOOC course space as a central location to access materials and lectures, but through tribes, blogs, and social media, they developed "affinity spaces" (Gee, 2005) for learning around their own interests and needs, while maintaining a core course community.

We can tell from the findings that the choice and design of the learning platform positively influenced student success and learning experiences. We agree with the Morville (2012, The Architecture of a Class section, para. 3) argument that a virtual learning environment's "architecture shapes the quality of the academic experience." As a result, MOOC instructors should choose their learning environments carefully. While it may not be feasible for all instructors to create a bespoke learning environment as we have done, it is in the interest of student learning that instructors carefully assess the affordances of large-scale learning environments, match those affordances to learning goals, and determine if they can support an expected type of learning experience.

Opportunities for Future Large-Scale Professional Development

Participant perceptions of success, positive response to course content and delivery, and takeaways that included new ideas, new networks, and renewed professional interest indicate that large-scale professional development can educate, engage, and enhance current continuing education models. These findings support the research question that framed this paper and align with Johnson et al. (2013) and Ecclestone (2013): this MOOC model and environment can provide LIS practitioners with a professional development opportunity in a global classroom of peers.

On the evolutionary timeline of library and information center-focused learning opportunities, the cMOOC socially-enabled, participatory experience offers the potential for more engagement between learners than single-session webinars, and could enhance the already popular Learning 2.0 model.

We believe this model, after further refinement, could and should be replicated for other professional development courses and initiatives. It offers a low-cost means to create professional development learning communities, which could be adopted by other LIS programs, organizations, and consortia for similar educational purposes. We would advocate for future partnerships with professional associations, institutions of higher learning, or non-profits to use the model to offer continuing opportunities for lifelong learning.

Author Notes

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Appendix A

Curriculum Outline: Modules Overview

Module 1—The Hyperlinked Library Model & Participatory Service

In Module 1, we will explore The Hyperlinked Library, which is a model emphasizing an open, participatory institution that welcomes user input and creativity. It is built on human connections and conversations. The organizational chart is flatter and team-based. The collections grow and thrive via user and staff involvement. Librarians are tapped in to user spaces and places online to interact, have presence and point the way.

Module 2—Hyperlinked Library Communities

In Module 2, we will consider tweaking our perception of the library user by focusing on her digital life and the hyperlinked communities she's a part of. Additionally, we'll think about how libraries should be addressing hyperlinked communities with the same effort as their face-to-face communities, and think about roles librarians can play in creating and facilitating hyperlinked communities.

Module 3—Community Engagement

In Module 3, we will examine how we can engage hyperlinked communities. Employing some of the concepts from Module 2 and using the skills and tools at our disposal, we'll consider our options for engaging emerging online and hybrid communities, as well as incubating our own.

Module 4—Planning for Hyperlinked Libraries

In Module 4, we will explore planning for Hyperlinked Libraries. How do we plan effectively for hyperlinked services? How do we balance technolust, institutional mission and the needs of our users? How do we create libraries at Web scale with a global reach and local focus?

Module 5—Transparency & Privacy

In Module 5, we'll consider the advantages of cultivating a transparent library and professional ethos, while addressing the inherent issues of privacy when doing so. What does a transparent library/librarian look like, and what are the real, tangible advantages? Of the multitude of approaches to privacy, which ones are relevant and useful to help us find an optimal flow of information?

Module 6—User Experience

In Module 6, we will explore the im-

portance of user experience to the THL model. Aaron Schmidt, author of the monthly Library Journal column "User Experience" writes: "Every touchpoint, or place that someone can come into contact with your library or its services, is fair game for evaluating how it fits into the experience you're giving your users." How can we craft friendly, engaging and useful interactions within our services?

Module 7—Mobile & Geo-Social Environments

In Module 7, we will explore the impact of mobile technologies on our services. These include cloud computing, mobile devices/applications and tablets. All of these technologies share a common ground: portable, everywhere access. Mobile technologies and applications can also transform the process of discovery for ourselves and our users. Not only can access occur anywhere, but the possibilities for learning and sharing creative projects grows.

Module 8—Rest & Catch Up

In Module 8, we will take a breather and give everyone a rest and a chance to catch up with our course. Take a walk, do some yoga, read a good book. Use this time to recharge!

Module 9—Creation Culture

In module 9, we explore the evolution of library as a space for creation. We'll look for ways to encourage the creativity of our users via digital and physical means. We'll help them unleash ideas. Open minds. Once we start believing the library can support the culture of creation, it'll be even easier for our users to do the same.

Module 10—Learning & New Literacies

In Module 10, we will explore how learning is changing and the ways new literacies are impacting how information is shared. In *A New culture of Learning: Cultivating the Imagination for a World of Constant Change* by Douglas Thomas and John Seely Brown, the authors discuss the impact of technology on education and on society. They argue that the old adage "teach a man to fish and feed him for a lifetime" is limited because this assumes that there will always be unlimited fish and no changes to the concept and mechanisms of fishing. Change, however, is a constant and one of the things we struggle to adapt to in libraries while staying true to our mission.

Module 11—Reflective Practice

In Module 11, we will explore the human center of the Hyperlinked Library. Being a good librarian means to take a humanistic stance toward policy and decision-making. It means a focus on the heart.

Module 12—Symposium

In Module 12, you will share your main thoughts or insights from #hyperlibMOOC as a part of a virtual symposium with your peers. Focus on this question: What are you taking away from the Hyperlinked Library MOOC?

Appendix B

Assignments

Required Assignments

Students seeking the SJSU SLIS Certificate of Completion were required to complete the following assignments:

1. *Blogging*

    After establishing a blog through our MOOC site, you will use this electronic publishing medium to share your thoughts and ideas on the Hyperlinked Library as you progress through the course. Weekly reflection blogging will allow you to explore course modules and apply your own critical take on the topics. After reading and exploring a module, write a blog post about the experience and how you believe the issue/topic impacts library service.

What might change? What could we do differently? Where do the readings/videos/sites take you in your thinking about library or information work?

2. *Virtual Symposium*

The symposium is a way to share your learning with the other members of our hyperlinked community. Imagine strolling around a beautiful space where each of you have created something the represents your takeaways or insights from #hyperlibMOOC. Focus on this question: What are you taking away from the Hyperlinked Library MOOC?

3. *Other Assignments*

Students seeking the SJSU SLIS Certificate of Completion were required to complete three out of five of the following assignment options:

Community Engagement: The modules on hyperlinked library communities emphasize rethinking the library user as an individual who leads just as rich a life online as she does offline. Doing so, however, requires us to think about technologies and services that we can offer to engage our digital users in their broad communities of interest.

Planning for Emerging Technologies: After exploring our module devoted to planning, you will choose one of two options to gain some experience planning for an emerging technology-based service or crafting a social media guidelines statement. Either of these options will allow you the chance to apply the concepts of participatory design to your deliverable. How can a new technology-based service enhance participation in the library or information center? How might human-focused, positive guidelines for social media use set a course for conversation?

Context Book: The Context Book assignment gives you an opportunity to explore literature outside of our focus for this course but tangentially related to core concepts. Some questions to spur your thinking: How does the book align with our course content? What can librarians glean from these works? How might the focus of some titles impact library service? Users? The way we exchange and share information? Consider your choice as a way to explore what might be coming for libraries within the framework of participatory service.

Online Professional Learning Network: The Online Professional Learning Network (OPLN) will stimulate you to begin curating online professional resources that will continue your learning outside of your formal learning experiences here an elsewhere. We define an OPLN in the broadest way possible: If a resource is online and it helps you to achieve your learning goals, it is a part of your learning network.

Director's Brief: The Director's Brief gives you the opportunity to home in on a technology-enhanced service that was mentioned through the course content or lectures, or perhaps you encountered it in conversations with your peers. Situated as a report-of-sorts for a library director, you'll be crafting a brief that informs your administrator of its origins, related terminologies, uses for LIS environments, and addresses its potential pitfalls.

Appendix C

HL MOOC Demographics

From the pre-MOOC survey, the following demographics emerged:

Age and Gender

84% of participants were female.
16% of participants were male.
30% of participants were aged 45–54.
26% were aged 35–44 and 25–34.
17% were aged 55–64.
1% were aged 18–25 and 65+.

Work Environments

38.5% work in an academic library.
25% work in a public library.

9% reported another type of environment.
9% reported not working in a library.
6% work in a school library setting.
6% work in a corporate library setting.
6% work in a state or national library.
1% reported currently enrolled in an LIS program.
1% work in a special archive or museum.
Previous MOOC Participation
63% of participants had not participated in a MOOC.
37% had participated in a MOOC before joining the HL MOOC.

Appendix D

SLIS MOOC Pre-Survey

(make sure this matches the actual questions asked)

What is your age? (You must be 18 years of age or older to participate in this study)

• 18–25
• 25–34
• 35–44
• 45–54
• 55–64
• 65+

Gender:
• Male
• Female

Please input your state/province and country:
• [textbox]

What is your highest level of education:
• [textbox]

Have you taken a class or participated in a learning program online (e.g., through a LIS distance education program, interactive online workshop, self-directed learning tutorials, etc.):
• Yes
• No

Who is your employer or affiliated institution?

• [textbox]

How long have you worked in library and information environments? [sliding scale]

• 0–5 years
• 6–10 years
• 11–20 years
• 21–30 years
• 30 years or more

Have you ever participated in a MOOC?
• Yes
• No

Why are you interested in enrolling in MOOCs?

• [textarea]

What do you expect to learn from The Hyperlinked Library course?

• [textarea]

Do you think The Hyperlinked Library MOOC will aid your professional development?

• Yes
• No

    IF YES (logic sequence)

What is it about the MOOC that you think will aid your professional development?

• [textarea]

    IF NO (logic sequence)

Why do you not think the MOOC will aid your professional development?

• [textarea]

Appendix E

SLIS MOOC Post-Survey

Do you think you were successful in this course?

• Yes
• No

Please explain how you defined your level of success.(Some students consider success as the number of assignments completed, the amount of time spent in the course, the quantity or quality of the content created or personal goals going into the course.)

• [textarea]

What does the term community mean to you in terms of this course and a MOOC in general?

Did you feel like you belonged to a community in this course?

• Yes
• No

IF YES (logic sequence)

Describe how and when your sense of community in this course developed?

• [textarea]

Please identify the ways you saw community being constructed within this MOOC. What experiences, formats and/or tools do you feel contributed to this sense of community?

• [textarea]

IF NO (logic sequence)

What do you think caused your sense of community not to develop?

• [textarea]

Please identify specific experiences, formats, and/or tools that helped or hindered your sense of belonging to the MOOC community.

• [textarea]

Please share any other information related to community and building community in a MOOC that might be useful for the instructors and researchers to know about when considering students' perceptions of community and online spaces, particularly as it relates to a MOOC.

• [textarea]

What challenges did you encounter while learning in the MOOC environment?

• [textarea]

What was most enjoyable about learning in the MOOC environment?

• [textarea]

What did you like least about the MOOC?

• [textarea]

What was the most unexpected experience you had in the MOOC?

• [textarea]

What did you gain most from taking part in the MOOC?

• [textarea]

Were the learning outcomes and goals of the MOOC clear to you?

• Very clear
• Partly clear
• Not at all clear

To what extent were your expectations of the MOOC fulfilled?

• Fully
• Partly
• Not at all
• Please explain [textarea]

What steps could be taken to improve the MOOC?

• [textarea]

How was your experience of learning collaboratively with your peers in the MOOC?

• Positive
• Negative
• Please explain [textarea]

How was your experience of learning collaboratively using our custom MOOC environment?

• Positive
• Neutral
• Negative
• Please explain [textarea]

How did you communicate with your peers at the course site (choose all that apply)?

• Blog posts
• Blog comments
• In a Tribe
• Forum topics
• By updating your activity
• Private messaging
• Public messaging using @username in the activity

What social networking websites did you use to communicate with your peers (choose all that apply)?

• Twitter
• Facebook
• Youtube
• Friendfeed
• Tumblr
• LinkedIn
• Pinterest
• Google+
• Other: (please specify) [textbox]

Reflecting on your MOOC experience, what roles do you think librarians might play within MOOCs?

• [textarea]

What did you learn in the MOOC that may influence your professional practice?

• [textarea]

How do you think MOOCs will influence your professional practice?

• [textarea]